# National Transportation Safety Board Washington, DC 20594

#### **Brief of Accident**

#### Adopted 12/30/2003

CHI	02F	A093
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File No. 14521	(	03/15/2002	Alma, WI	Aircraft Reg No.	N228PA	Tim	ne (Local): 02:00 CST
Engine Ma Aircraf Number o Operating Ce Name Type of Flight	ake/Model: ft Damage: of Engines: ertificate(s): of Carrier: Operation:	Cessna / 208B Pratt & Whitney / PT6A-114A Substantial 1 On-demand Air Taxi Priority Air Charter Non-scheduled; Domestic; Cargo Part 135: Air Taxi & Commuter		Crew Pass	Fatal 1 0	Serious 0 0	Minor/None 0 0
Ď	estination:	Minneapolis, MN Detroit, MI Off Airport/Airstrip			Weathd Basid Lowe Wind Tempel Obst	c Weather: In:	eather Observation Facility strument Conditions 00 Ft. AGL, Broken 50 SM 10 / 006 Kts
Pilot-in-Command	Age:	40			Flight Ti	me (Hours)	
Certificate(s)/Rating(s) Commercial; Multi-engine Land; Single-engine Land Instrument Ratings Airplane			Total All Aircraft: 4617 Last 90 Days: Unk/Nr Total Make/Model: 2317 Total Instrument Time: UnK/Nr				

The pilot departed with the airplane contaminated with ice, into known severe icing conditions, and was unable to maintain altitude, subsequently impacting trees and terrain. Witnesses reported the accident airplane arrived at the departure airport contaminated with ice. Several witnesses stated they asked the pilot if he needed the airplane deiced prior to his next departure and the pilot stated he did not need any deice service. Several witnesses said they noticed the pilot chipping-off ice from the airplane prior to his departure. While en route the pilot reported the airplane had encountered icing conditions and he was unable to maintain altitude. Several thick pieces of ice were recovered around the accident site and one of the recovered ice pieces had a semicircular shaped edge that was consistent with a leading edge of an airfoil. No pre-impact anomalies were found with the leading edge de-ice boots that were installed on both wings, vertical and horizontal stabilizers, and wing struts. Federal Aviation Regulations state that all ice contimination shall be removed prior to flight. The Cessna 208B Pilot Operating Handbook indicates that continued flight into known icing conditions must be avoided.

#### Brief of Accident (Continued)

CHI02FA093

File No. 14521 03/15/2002 Alma, WI Aircraft Reg No. N228PA Time (Local): 02:00 CST

Occurrence #1: MISCELLANEOUS/OTHER

Phase of Operation: OTHER

## Findings

1. (C) ICE/FROST REMOVAL FROM AIRCRAFT - NOT PERFORMED - PILOT IN COMMAND

2. PROCEDURES/DIRECTIVES - NOT COMPLIED WITH - PILOT IN COMMAND

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Occurrence #2: IN FLIGHT ENCOUNTER WITH WEATHER

Phase of Operation: CRUISE

# **Findings**

3. (F) WEATHER CONDITION - ICING CONDITIONS

- 4. (C) FLIGHT INTO KNOWN ADVERSE WEATHER INTENTIONAL PILOT IN COMMAND
- 5. PROCEDURES/DIRECTIVES NOT COMPLIED WITH PILOT IN COMMAND

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Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT

### Findings

- 6. AIRCRAFT PERFORMANCE DETERIORATED
- 7. (C) ALTITUDE/CLEARANCE NOT POSSIBLE PILOT IN COMMAND
- 8. (F) OBJECT TREE(S)

Findings Legend: (C) = Cause, (F) = Factor

The National Transportation Safety Board determines the probable cause(s) of this accident as follows.

The pilot not removing the ice contamination from the airplane prior to departure and the pilot intentionally flying into known severe icing conditions, resulting in the aircraft not being able to maintain altitude/clearance from the terrain. Factors to the accident included the icing conditions and the trees encountered during the forced landing.